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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,650	12/26/2006	Rex D. Ramsier	089498.0445.US	6590
39905 7590 09/25/2008 ROETZEL AND ANDRESS 222 SOUTH MAIN STREET AKRON, OH 44308				
EXAMINER				
CYGAN, MICHAEL T				
ART UNIT		PAPER NUMBER		
2855				
MAIL DATE		DELIVERY MODE		
09/25/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/556,650

**Applicant(s)**

RAMSIER ET AL.

**Examiner**

Michael Cygan

**Art Unit**

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 1/25/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9, 11-13, 15, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Janata (US 4,514,263). Janata discloses the claimed invention, a gas detector comprising: a first electrically conductive material layer; an electrically nonconductive material layer disposed on the first electrically conductive material layer; a second electrically conductive material layer disposed on the electrically nonconductive material layer; a gas source in fluid communication with the second electrically conductive material layer; and a power source in electrical communication with the first and second electrically conductive material layers. The first electrically conductive layer may contain aluminum; the second may contain gold; the insulator may contain silicon dioxide; the device is made through forming the layer and disposing layers thereon, and placing the conducting layers in electrical communication with a power source (column 5). The detector is powered by direct current [32]; see Figure 1 showing direct current symbol. The method for using the above detector to determine the presence of a gas by determining the change in impedance in a tunnel junction is

disclosed; see, e.g., column 7. See entire document, particularly Figure 1, column 5, and column 7 lines 64+.

Claims 1, 3, 7-9, 12, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Samman (US 6,298,710 B1). Samman discloses the claimed invention, a gas detector comprising: a first electrically conductive material layer; an electrically nonconductive material layer disposed on the first electrically conductive material layer; a second electrically conductive material layer disposed on the electrically nonconductive material layer; a gas source in fluid communication with the second electrically conductive material layer; and a power source in electrical communication with the first and second electrically conductive material layers. The second electrically conductive layer may contain platinum; the device is made through forming the layer and disposing layers thereon, and placing the conducting layers in electrical communication with a power source having either alternating or direct current; see abstract, Figure 1, and column 3.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Janata (US 4,514,263) in view of Mifsud (US 6,290,838 B1). Janata teaches the claimed invention except for application to wine component sensing. Mifsud teaches the desirability of characterizing the chemical composition of wine (column 1 lines 13-23). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply wine as the sample as taught by Mifsud to the sensor of Janata to sense wine components, since Mifsud teaches that such analysis is often necessary, and thus provides expectation of financial advantage through such application.

Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janata (US 4,514,263) in view of Maclay (US 5,716,506). Janata teaches the claimed invention except for application to sulfur dioxide. However, Maclay teaches that electrochemical sensors having gold electrodes usable for hydrogen sulfide may also be used to sense sulfur dioxide (column 14 lines 18-22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to sense sulfur dioxide (as taught by Maclay) with the sensor of Janata, since Janata teaches detection of hydrogen sulfide, and Maclay teaches that sulfur dioxide may also be advantageously detected by such sensors; the advantage being extending the usefulness of the sensor of Janata to other lucrative applications.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Cygan, Ph.D., J.D./  
Primary Examiner, Art Unit 2855